

## CLAIMS

## 1 An electronic board comprising:

a grid of *grid points* (1) on a flat surface(6), where each *grid point*(1) is a visible element which is capable of detecting when it is pressed, and an illumination source(2) inside or below the surface which is capable of illuminating the visible element by either of two colours; and

a character display(11) ; and

a *game manager*(3) made of

a CPU and memory, connected electronically to the grid points and illumination sources such that it has complete control on which grid point is illuminated and in what colour, and it is notified whenever any of the grid points is pressed,

and a computer program which is executed by the CPU,

which manages a one or more games, of which at least one game is played according to these rules:

when a player touches a point(1), the games manager(3) checks if it is a legal move, and if it is switches the point(1) to the player's colour;

to evaluate if a point(1) is a legal move, the games manager(3) checks in turn each of a pre-defined set of imaginary straight lines emanating from the point(1), assigning a value of 0 to each of these lines that does not pass through an illuminated point, a value of 1 if the closest illuminated point that it passes through is illuminated with the colour of the player, and -1 if it is in the opponent's colour, and then compares the sum of the values of all the lines to a fixed number, and if the sum is larger or equal the point(1) is a legal move for the player;

the games manager(3) declares as winner, using the character display(11), the player that has more points of their colour in the end of the game.

2 A board as described in Claim 1, where the arrangement of the points is square.

3 A board as described in Claim 2, where the set of virtual lines is the 8 lines emanating from the point and going through the closest 8 points.

4 A board as described in Claim 1, where the arrangement of the points is hexagonal.

5 A board as described in any preceding claim, where the fixed number which is used in determining the legality of a move is 0.

6 A board as described in any preceding claim, where pressing a point is done by special implement that causes a short circuit which the board uses to identify the point that is pressed.

7 A board as described in any preceding claim, where the players use, hold or wear a special implement which identifies which player is playing by communicating with the board.

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a character display (11) ; and

a *game manager*(3) made of

a CPU and memory, connected electronically to the grid points and illumination sources such that it has complete control on which grid point is illuminated and in what colour, and it is notified whenever any of the grid points is pressed,

and a computer program which is executed by the CPU,

which manages a one or more games, in some of which the behaviour of the board is as follows:

the game starts with an equal number of points(1) illuminated in each of the two colours;

when a player presses a point, the games manager(3) switches off some points and potentially changes the colour of some other points;

when all the points that are illuminated are illuminated in the same colour, the games manager(3), using the character display (11), declares the player of this colour as winner.

2 A board as described in Claim 1, where the arrangement of the points is square.

3 A board as described in Claim 1, where the arrangement of the points is hexagonal.

4 A board as described in Claim 2, where when a player presses a point the games manager(3) switches off points of the player's colour which can be reached from the pressed point by moving three point along the line or the column that the pressed the point is in and then moving two points in orthogonal direction, and points of the opponent's colour which can be reached from the pressed point by moving two points along the row or the column and then moving one point in an orthogonal direction.

5 A board as described in any preceding claim, where pressing a point is done by special implement that causes a short circuit which the board uses to identify the point that is pressed.

6 A board as described in any preceding claim, where the players use, hold or wear a special implement which identifies which player is playing by communicating with the board.

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a character display (11) ; and

a *game manager*(3) made of

a CPU and memory, connected electronically to the grid points and illumination sources such that it has complete control on which grid point is illuminated and in what colour, and it is notified whenever any of the grid points is pressed,

and a computer program which is executed by the CPU,

which manages a game in which

When a player presses a point(1), the games manager(3) changes the illumination of a pattern of points(1) around this point to the player colour if they were switched off, or reverse their colour if they were on;

When all the points(1) are switched on, the games manager(3), using the character display(11), declares as the winner the player of the colour of the majority of the points.

2 A board as described in Claim 1, where the boards perform the changes only when an unilluminated point is pressed.

3 A board as described in any preceding claim, where pressing a point is done by special implement that causes a short circuit which the board uses to identify the point that is pressed.

4 A board as described in any preceding claim, where the players use, hold or wear a special implement which identifies which player is playing by communicating with the board.

5 A board as described in any preceding claim, where the grid points are in an hexagonal pattern.